

ABSTRACT OF DISCLOSURE

A method of fabricating a trench capacitor of a memory cell, includes providing a semiconductor substrate with a surface covered by a pad layer, forming a trench in the substrate, forming a first layer on the pad layer and on the surface of the trench, removing a portion of the first layer to form a residual first insulating layer, forming a first conductive layer on the residual first layer, removing a portion of the first conductive layer, removing a portion of the residual first layer, driving out charged elements from the first layer into the semiconductor substrate, to form a first doped substrate region, removing the first layer, forming a node nitride on the trench, forming a second conductive layer on the pad layer and on the trench, removing a portion of the second conductive layer to form a second doped substrate region in the trench.